

should it be demonstrated that other fern spp., especially those difficult to store, will survive this process.

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Shorter Notes

FERNS AND FERN ALLIES ON BONAVENTURE ISLAND, QUEBEC.—Bonaventure Island off the Gaspé Peninsula has long been a mecca for ornithologists, and it was to study sea birds that I visited that island from July 5–25, 1946. The richness of the flora and a spell of inclement weather were instrumental in my obtaining a reasonably complete collection of the pteridophytes of the island and a small collection of flowering plants, many of them not mentioned by Adams in his preliminary list of the plants of the island.¹

The flowering plants and one set of the pteridophytes were deposited in the herbarium of the University of California at Berkeley and the remainder in the herbarium of the University of Michigan. Of the 29 pteridophyte species collected, only three (*Pteridium aquilinum*, *Thelypteris phegopteris*, and *Equisetum*

¹Adams, J. 1940. A Preliminary list of the plants of Bonaventure Island. Canadian Field Nat. **54**: 7-9.

sylvaticum) were listed by Adams¹ and five others (*Dryopteris filix-mas*, *Osmunda cinnamomea*, *Botrychium lunaria*, *B. matricariifolium*, and *Selaginella selaginoides*) were reported from the island by Scoggan.² Because of the paucity of published records of pteridophytes from this island and the desirability of a guide to the habitats and relative abundance of these plants, I wish to put the results of this collection on record. I am indebted to Dr. W. H. Wagner, Jr., for his encouragement and help with the manuscript. An annotated list of the species found follows.

POLYPODIUM VIRGINIANUM L. Not uncommon; a thriving colony was found growing with *Empetrum* on a shaded boulder in mixed woodland.

PTERIDIUM AQUILINUM (L.) Kuhn. Found sparingly in open meadows.

CRYPTOGRAMMA STELLERI (Gmelin) Prantl. Fairly common on rock ledges. Some plants were found which appeared to be the hosts of a species of rust.

ASPLENIUM VIRIDE Hudson. A single colony of several plants of this species was found on a limestone ledge by a stream deep in coniferous forest. Some fronds measured up to seven inches in length.

ATHYRIUM ANGUSTUM (Willd.) Presl. Fairly common in wet ground in openings in the coniferous forest.

GYMNOCARPIUM DRYOPTERIS (L.) Newm. Common under conifers.

THELYPTERIS PHEGAPTERIS (L.) Slosson. Abundant under conifers.

DRYOPTERIS CAMPYLOPTERA Clarkson. Abundant in recently cut-over areas in the coniferous forest where it grows waist-high with other disturbance indicators as *Ribes* and young birch. Its appearance in disturbed areas parallels that of *Pteridium aquilinum* in many areas to the south.

DRYOPTERIS INTERMEDIA (Willd.) Gray. Uncommon under conifers.

CYSTOPTERIS BULBIFERA (L.) Bernh. Not uncommon in moist parts of the coniferous forest and on shaded rock ledges.

CYSTOPTERIS FRAGILIS (L.) Bernh. Fairly common in coniferous forest.

DRYOPTERIS FILIX-MAS (L.) Scott. Uncommon in coniferous forest. A particularly large plant was found in the bottom of a small temporary stream near its head.

POLYSTICHIMUM BRAUNII (Spenner) Fee. Uncommon in moist coniferous forest.

MATTEUCCIA STRUTHIOPTERIS var. PENNSYLVANICA (Willd.) Morton. Al-

²Scoggan, H. J. 1950. The flora of the Bic and the Gaspé Peninsula, Quebec. Nat. Mus. Canada Bull. 115. pp. 1-399.

though very common on the mainland, this species was only encountered on the island in a few wet places in thin coniferous forest.

OSMUNDA CINNAMOMEA L. var. CINNAMOMEA and

OSMUNDA CLAYTONIANA L. both fairly common in wet openings in the forest.

BOTRYCHIUM LUNARIA L., B. MATRICARIFOLIUM A. Braun, and B. SIMPLEX Hitchcock. Many scattered colonies of all three in open meadows, growing with moss, *Iris*, and *Polygonum viviparum*.

BOTRYCHIUM VIRGINIANUM L. Rare. A colony found growing in partial shade in a small clearing in the coniferous forest.

EQUISETUM ARVENSE L. Common in wet meadows.

EQUISETUM PRATENSE Ehrhart. One colony found growing with *E. arvense* in a damp meadow.

EQUISETUM SCIRPOIDES Michx. A colony found growing in tufts on stumps in cleared ground.

EQUISETUM SYLVATICUM L. var. MULTIRAMOSUM Fern. Very common, replacing *E. arvense* in moist areas in coniferous forest.

LYCOPODIUM ANNOTINUM L. Uncommon; collected in man-made clearing in coniferous forest.

LYCOPODIUM CLAVATUM L. and L. LUCIDULUM L. Uncommon in coniferous forest.

LYCOPODIUM OBSCURUM L. Rare. Two small plants were found in coniferous forest.

SELAGINELLA SELAGINOIDES (L.) Link. A good-sized colony was found in an open bog, where the species grew on small stumps in company with *Parnassia* and *Drosera*.

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A NOTE ON ELAPHOGLOSSUM CRINITUM.—A number of years ago during one of my frequent botanizing trips to Cuba I spent some time at the "rest house" of the Hermanos de la Salle high up on the peak of Loma del Gato. This verdant mountain, one of the tallest in Cuba, lies not far from Santiago. Because of the extensive botanical activities of the Brothers of the Colegio de la Salle, both in Santiago and in Havana, its flora is reasonably well known. Especial attention was paid, by several of the noted Cuban botanists, to its extraordinary fern flora, which ranges into the hundreds of species, and includes a remarkable number of endemics.